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ABSTRACT

In a national survey, teachers who had more computer technology training used computers with their students in more ways and to a greater extent than teachers with fewer hours. Using the same questions, responses from third grade public school teachers in Illinois were compared to the responses in the national survey. Also, in this study, the surveys were also sorted by demographic area to identify the differences or similarities between them. The data suggest that the number of hours of computer technology training make a difference in how computers are used. Teachers with more training are more likely to use computers in more ways and to a greater extent. The data sorted by demographic area and the number of hours of training indicated some differences. Compared to third grade teachers in rural and urban areas, teachers in suburban areas used computer technology to a greater extent and in more ways, even though more teachers in rural areas had more hours of training. The results of the responses of third grade teachers in Illinois compared top to the national sample of elementary teachers responses, showed some similarities and some differences. Illinois teachers assigned computers for research and for demonstrations and simulations more often than teachers in the national sample. Problem solving, however, was an area that was below the national survey average. Also, the number of hours of training correlated to the teachers' feelings of preparedness. These results are similar to the results of the national survey. Includes 11 figures. The survey questionnaire and survey letter are appended. (Contains 18 references.) (Author/AEF)

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Running Head: ROLE OF TEACHER TRAINING ON STUDENT COMPUTER USE

ED 474 089

The Role of Teacher Training on Student Computer Use in Illinois at the Third Grade Level

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Abstract:

In a national survey, teachers who had more computer technology training used computers with their students in more ways and to a greater extent than teachers with fewer hours. Using the same questions, responses from third grade public school teachers in Illinois were compared to the responses in the national survey. Also, in this study, the surveys were also sorted by demographic area to identify the differences or similarities between them.

Student Computer Use in Illinois at the Third Grade Level

In the late 1970's computer use has changed greatly with the introduction of the personal computer. Then, computers had slow connections, simple graphics, and green screens. Graphics were simple due to limited memory (Fuller, 2000). Few schools purchased computers as they were considered a luxury.

Since then, computer technology changed. The new computers were faster, had more memory, and were cheaper. More computers started appearing in schools. The first educational technology plan was developed in 1996 and released by the U.S. Secretary of Education. The plan called for schools to use technology to help children to become better educated and to prepare them for the future (http://www.ed.gov/Technology/elearning). Funding was made available for schools to purchase computers and gain Internet access, to train teachers, and to provide technical support (http://www.ed.gov/Technology/elearning).

In 1999, the U.S. Department of Education revised their goals with the input of stakeholders: educators, researchers, policymakers, students, parents, and higher education, industry and other leaders. As a result of these discussions, five new national goals for technology in education were added.

NATIONAL EDUCATIONAL TECHNOLOGY GOALS

Goal 1: All students and teachers will have access to information technology in their classrooms, schools, communities and homes.

Goal 2: All teachers will use technology effectively to help students achieve high academic standards.

Goal 3: All students will have technology and information literacy skills.

Goal 4: Research and evaluation will improve the next generation of technology applications for teaching and learning.

Goal 5: Digital content and networked applications will transform teaching and learning.

Many districts wanted teachers to become computer literate yet were not sure whether to make the training mandatory or optional. Progress is closely watched at all levels: district, state,

and national through technology attendance and surveys. To track the progress of this movement at the national level, the National Center for Education Statistics studies many factors involving teacher training and teacher and student use.

Evidence for the Effect of Teacher Training on Computer Use

Technology in schools is not new (overhead projectors and TVs), however, computer technology has been rapidly increasing. In the late 1980's and 1990's, the modems were outdated, the connections were slow, and memory was limited (Fuller, 2000). Since then the speed of computers has greatly increased making it a time efficient tool and the memory capacity have brought about a tremendous change in the complexity of graphics in programs. Many school districts have invested millions in computer technology (Schroeder, 1999). There have been an increasing number of computers in the classroom and computer labs (Smerdon, Cronen, & Lanahan, 2000).

In the year 2000, 98 percent of schools indicated having Internet connections (Cattagne and Farris 2001). The technology was in the schools, however many teachers were not computer literate.

The nature of teacher training and the implications it has on teacher and student use has caused many districts to develop technology plans (Mathews & Guarino, 2000). These plans are generally tied to the national technology goals. Districts assess the needs of the students and the staff to maximize the benefits of technology (Wolosoff, 1998; Mathews & Guarino, 2000; Norman, 2000). Input from teachers regarding training, practice, and lesson plans for the use of technology for their students is considered. Optimally, decisions should be evaluated in terms of student performance (Norman, 2000). Keeping pace with technology to meet the needs of the

students is important. Only eight out of 54 projected high growth careers over the next five years do not require technological fluency (Norman, 2000).

With the increasing number of computers and schools connected to the Internet, teaching teachers to use technology is a priority. A study by the National Center for Education identified a correlation between the number of hours of teacher computer technology training and percent of time they use technology for themselves and with their students (Smerden, Cronen, & Lanahan, 2000). Since there is a noted correlation between teacher computer technology and student use (Fuller, 2000; Mathews & Guarino 2000; Rowland 2000), many districts are offering teachers computer technology training. In Fuller's study, 2,280 students from fifth grade classrooms showed a strong correlation between teacher training and teacher and student use (Fuller, 2000).

In a study conducted by Smerden & Cronen (2000), teachers used computers more for classroom instruction depending on how many hours of technology training they received. Teachers with no hours of computer training used computers for classroom instruction 30 percent of the time versus 61 percent for teachers with 9-32 hours and even more when training exceeded 32 hours (71 percent).

In a study conducted by the National Institute for Educational Statistics (2000) elementary school teachers used computers with their students for various activities depending on the number of hours of training they received. Twenty-one percent of teachers who did not receive computer training used computers for application purposes. Nineteen percent of the teachers in this group used computers for practice drills. Twenty percent used them for research using the Internet. Fourteen percent used them for solving problems and analyzing data. Sixteen percent used them for research using a CD-ROM. 16% had their students produce media reports and four percent had their students correspond with others.

The group of teachers elementary school teachers who received 1-8 hours of training (small extent) used computers with their class in the following ways: Thirty-six percent used computers for computer applications, 26% used them for practice drills. 28% used the computers for research, 24% used them for problem solving purposes, 24% used computers for research using a CD-ROM, 20% had their students produce multimedia reports, and 7% had their students correspond with others.

Elementary school teachers with 9 hours or more of training (moderate to large extent), assigned computer use in the following ways: 41% of teachers had their students use computers for computer applications, 39% used computers for practice drills, and 25% had their students using computers for research. Also, 31% had their students solving problems, 27% had their students researching using a CD-ROM, 22% had students produce multimedia reports, 7% had their students corresponding with others (Rowland, 2000).

This information indicates that the more hours of training a teacher has using computers, the more ways the teacher will use computers with her/his class. This information also indicates that more teachers with 9-32 hours of training use computers for higher level thinking skills than in the 0-8 hour group.

However, there is concern regarding teachers who are not trained. Guhlin (2002) believes that teacher empowerment is the key to teacher involvement. Districts must provide extensive staff development and training opportunities. He states that peer training is essential because teachers know what their peers needs are and the peers are more comfortable seeking assistance.

There are indications that what is taught will impact the students' learning. Students who use applications that support high-order thinking show improved student performance compared to students who use computers mainly for learning games (March, 2001; Norman, 2000). Some

technology experts believe that the use of technology to promote problem-solving, critical thinking, and collaboration is a priority (March, 2001; Anderson, 2002). Other experts believe in a mixture of problem solving and applications such as drill and practice and integrated learning (Roblyer, 2000).

Studies indicate that teachers need training on how to use technology to enhance their curriculum. Teachers need to be involved in the decision-making process. Classroom practices and technology needs of the students and teachers must be discussed (Anderson, 2002). Teachers also need training on how to search for web-based lessons. They may find it difficult to find the most effective resources without assistance (Lindroth, 1998). Lindroth lists as one her favorite web-based lessons Tom March and Bernie Dodge's web-quest strategy site www.ozline.com/learning. A webQuest is a guided Internet-based activity where students are given a task and provided specific web addressees that have the resources necessary to complete the task. The WebQuest can be a single period activity or an extended project, and individual or group activities (Anderson, 2002). She also recommends the filamentality online registry, www.kn.pacbell.com/wired/fil/registry.html.

In summary, although computer technology has been in the schools for some time, there is a recent surge in computer use (Fuller, 2000). Due to this surge in technology, it is important to look at the various factors involved in computer use. Teacher training has been identified as an important factor in increasing student computer use. The teachers' choices for student use might improve the students' classroom performance.

Hypothesis: There will be a relationship between how teachers and their students use computers depending on the number of hours of computer technology training an Illinois third grade public school teacher receives. (0, 1-8, and 9-32 hours of computer training).

Method Section

Research Design: Correlational research design

Participants

The sample was stratified to include third grade teachers from various rural, urban and suburban public schools. Part-time, itinerant, and substitute teachers, teacher's aides, volunteers, and principals were excluded. A list of Illinois schools which include third grade classrooms were located on the CCD (Common Core of Data) web site. One hundred schools were chosen to call requesting principals to forward the survey to third grade teachers. The surveys were faxed to the schools. Due to time restraints, another one hundred schools from the CCD were mailed the cover letter and the survey. Also, the principal at this researcher's school sent an email to a state of Illinois list server for principals requesting participation in the study. In addition to this, approximately fifty schools in Illinois on the Internet with email addresses were contacted.

Ninety-one third grade regular education teachers from public schools responded to the survey.

Materials

A cover letter was formulated to send to the principals either by email, snail mail, or fax requesting permission to conduct the study of all third grade teachers in a particular school. The letter explained the purpose of the study and the need for teachers to respond to the survey questionnaire.

If the school was directly contacted and permission from the principal was granted, a copy of the cover letter to inform the teachers about the study and the survey was faxed or mailed to each school. The principal was asked to provide copies for the third grade regular

education teachers. A questionnaire based on a survey from the National Center for Education Statistics (Smerden & Cronen, 2000) containing instructions and questions regarding computer training and use of computers was sent to the teachers. The questions for the survey were replicated from the national survey. However, since this study is focusing on a limited number of variables, only questions relating to teacher training and student use were chosen.

The questionnaire contained inquiries related to how teachers use technology in third grade with their students and how much training they received in the past three years and past four to six years. On the demographic page, there were required fields and optional fields. The required fields were as follows: title/position, school name, area-rural, suburban, and urban. Optional fields included name of person completing the survey, school address, and email address. If all fields were completed, the teacher wished to receive a copy of the results. The following pages of the survey included information regarding the teachers' hours of professional development, and how they use the computer in their classroom or computers in a computer lab.

The options for computer use are as follows: use for classroom instruction, computer applications, practice drills, research using the Internet, solving problems and analyzing data, research using a CD-ROM, produce media reports/projects, graphical representations of materials, demonstrations/simulations, and correspondences with others.

Procedure

The public school participants were stratified by instructional level (third grade) and by geographical area (Illinois). All public schools in Illinois with a third grade regular education class (as indicated by the Common Core of Data web site), was eligible to participate in the study.

In February 2002, the school principal at this researcher's school emailed a cover letter to other principals using a principals list server. It introducing the survey and asked for principals to forward the information to a third grade teacher or teachers. The principals were asked to invite full-time, regular education, third grade teachers to participate in the study. Part-time, itinerant, and substitute teachers, teacher's aides, volunteers, and principals are excluded. The principals were asked to have a teacher contact this researcher to have a survey emailed or traditionally mailed to them.

Then, as teachers responded, questionnaires were sent to the third grade teachers participating in the survey. The response time was from February through June. The questionnaire was due in June. The teachers mailed, emailed, or faxed the surveys to this researcher.

Schools that had email addresses (as found on the web) were also selected to participate in this study. Most schools were listed under their district web pages. This was a time consuming method.

The last two methods of obtaining participants were by finding schools' addresses and phone numbers on the common core of data web site. Two hundred schools were either called or mailed the information regarding the survey.

These methods resulted in a pool of 91 responses from regular education third grade teachers.

Data analysis

The data was then collected and evaluated between June and July. The raw data was analyzed to explore the correlation between rural, suburban, and urban schools and teacher

training and teacher training and teacher and student computer use. This data was then compared to the results of a national survey measuring the same variables.

One anticipated correlation is that the more computer technology training a teacher receives, the more ways the teacher would assign computer technology with his/her students. This data was analyzed by comparing the percent of teachers in each level of training to the number of ways computers were used.

Another expected correlation is between the number of hours of training a teacher receives and the extent of use assigned in each category. The percent of each level of training was compared to the extent the teacher assigned each category.

The last factor to be analyzed is the relationship between teacher training in rural, suburban, and urban areas. The data from each group was be sorted and compared. It was expected that there would be no significant difference due to demographics in relationship to teacher training.

Results Section

Overview

The results reflect how teacher training affects student use of computers in the classroom. The information is from Illinois third grade public school teachers who completed a survey. A total of ninety surveys were examined to obtain the percent of teachers assigning different types of computer use to students as well as the percent teachers assign computers (small extent, moderate extent, and large extent) as a function of the number of hours of training they have received. Next, teachers' responses were sorted by demographic area and compared.

The survey questions were from a 1999 national survey of elementary and secondary schoolteachers. The results of my survey were then compared to the results of the national survey. Some of the third grade teacher results were directly compared to the elementary teacher population in the national survey.

Illinois third grade teacher responses

Figure 1. Percent of Illinois third grade public school teachers assigning different types of computer use

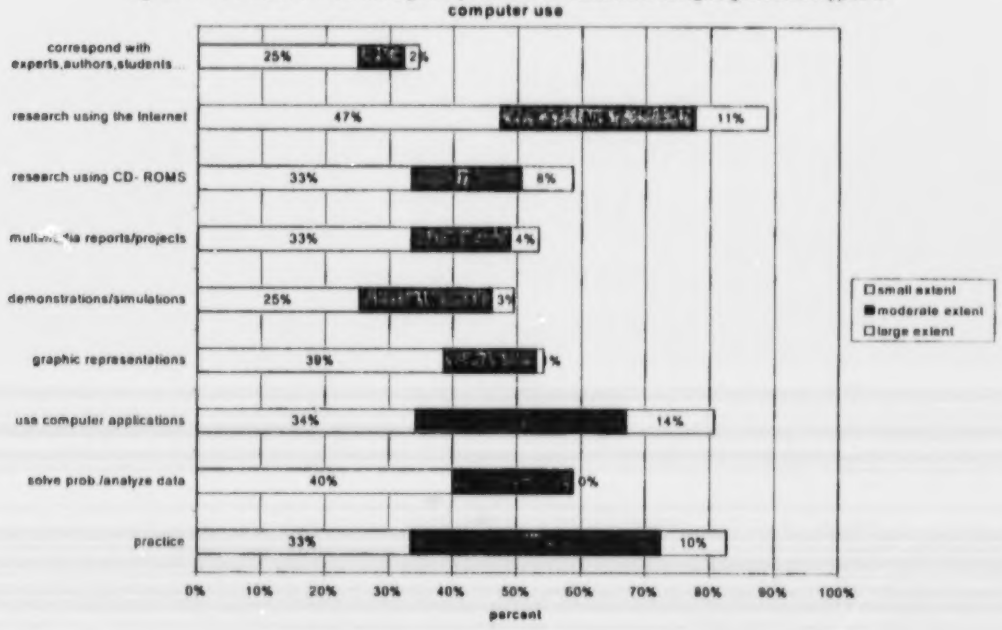

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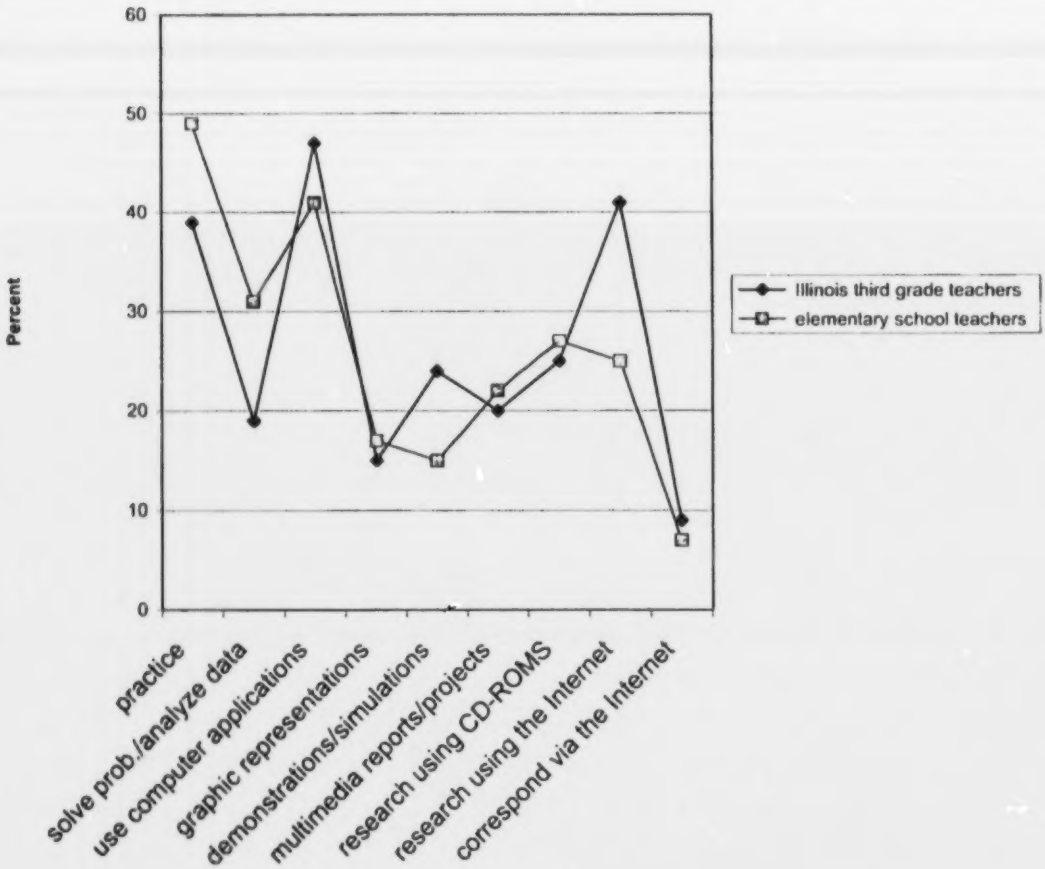
Figure 2. Comparison of responses from Illinois third grade teachers and elementary teachers in a 1999 national survey as to how computer technology is assigned.



Comparison with National Survey

In comparing the totals of the moderate to large extent responses in this survey to the results of elementary school teachers in a 1999 national survey, some differences were evident. Illinois third grade teachers assigned research using the Internet (41% compared to 25%) and demonstrations/simulations (24% versus 15%) more often than the national sample. Also, the third grade teachers had assigned more practice (47%versus 39%) and computer applications (47% versus 41%) than in the national study. Fewer Illinois third grade teachers were using

technology to solve problems and analyze data compared to the national survey (19% versus 31%). Other teachers' responses were very close, including research using CD-ROMS (25% versus 27%), producing multimedia reports/projects (20% versus 22%), and corresponding with others (7% versus 9%).

Detailed Analysis

Figure 3. Percent Illinois Third Grade Teachers Assigned Each Category vs. Hours of Training

		practice	solve prob./analyze data	use computer applications	graphic representatio	demonstrations/ simulations	multimedia reports/projects	research using CD ROMS	research using the Internet	Correspondence via the Internet
1-8 hours	small extent	34%	35%	35%	32%	29%	39%	40%	64%	29%
	Moderate extent	39%	15%	37%	12%	12%	7%	16%	29%	2%
	large extent	10%	0%	7%	0%	0%	0%	2%	2%	5%
Moderate and large total		49%	15%	44%	12%	12%	7%	18%	31%	7%
9-32 hours	small extent	21%	43%	27%	54%	20%	26%	33%	40%	0%
	Moderate extent	55%	20%	37%	14%	33%	26%	13%	33%	21%
	large extent	10%	0%	13%	0%	0%	6%	17%	20%	14%
Moderate and large total		65%	20%	50%	14%	33%	32%	30%	53%	35%
>32 hours	small extent	64%	47%	53%	29%	27%	33%	14%	27%	20%
	Moderate extent	21%	27%	13%	21%	20%	20%	29%	33%	7%
	large extent	14%	0%	33%	7%	20%	13%	7%	20%	7%
Moderate and large total		45%	27%	46%	28%	40%	33%	36%	53%	14%

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Table 1 shows that Illinois third grade teachers with more hours of computer technology training used computers with their students more often and in more ways than teachers with less training. Teachers with 9-32 hours and >32 hours of training were more likely to assign computer applications (50% and 46%) and research using the Internet (46% and 53%). Practice was assigned the most by teachers in the 9-32 hour group. Respondents chose not to assign solving problems/analyzing data (usually associated with higher level thinking skill) to a large extent in favor of moderate extent (20% and 27%).

Teachers with the least amount of training (1-8 hours) assigned practice to a higher degree than any other category. This group chose to assign multimedia reports and corresponding via the Internet less than in any other group. They also rarely assigned computer use to a large degree.

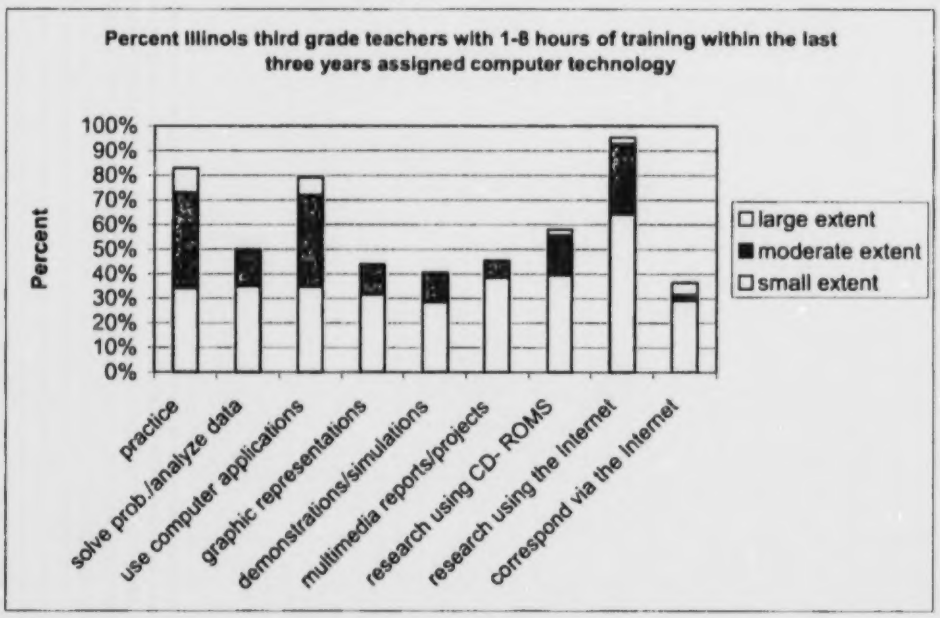

Figure 4

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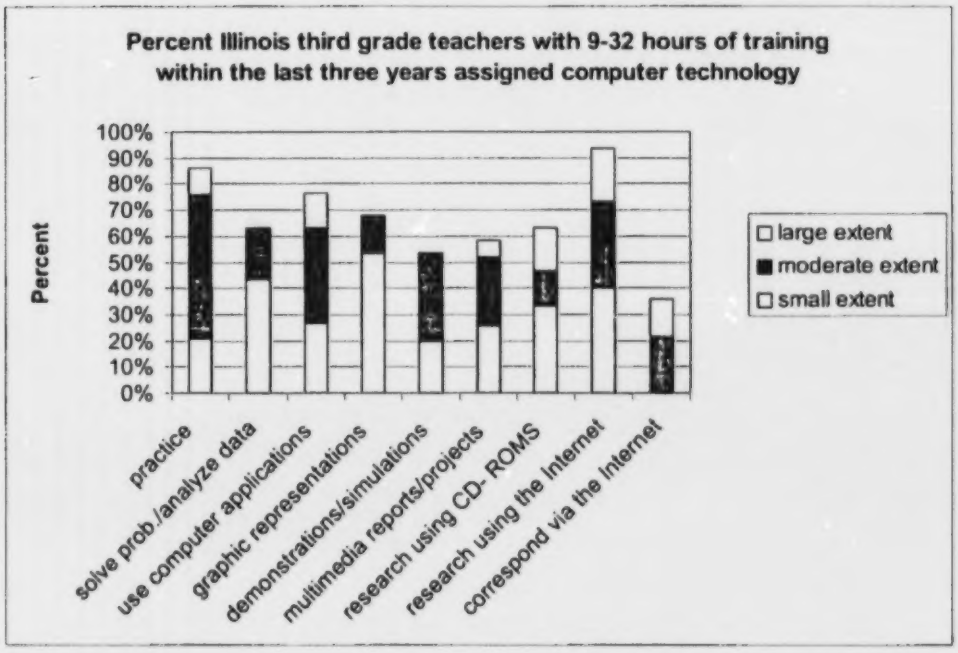

Figure 5

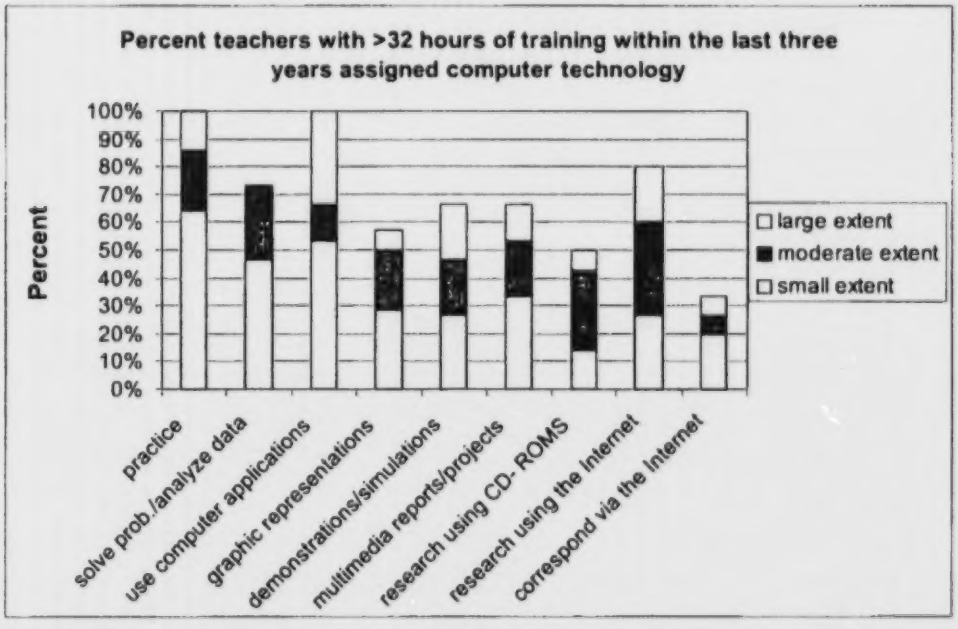

Figure 6

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Figure 7. Percent Illinois Public School Teachers In Rural, Suburban, and Urban Areas Assigned Various Computer Activities

	practice	solve prob./analyze data	use computer applications	graphic representations	demonstrations/simulations	multimedia reports/projects	research using CD-ROMS	research using the Internet	correspond via the Internet
Small extent									
rural	41%	34%	45%	29%	18%	14%	25%	42%	22%
Suburban	28%	48%	31%	47%	33%	54%	42%	47%	27%
Urban	35%	33%	24%	38%	24%	29%	33%	62%	30%
Moderate extent									
rural	34%	16%	21%	10%	12%	14%	16%	24%	13%
Suburban	50%	18%	40%	19%	27%	14%	18%	35%	9%
Urban	40%	24%	38%	14%	24%	19%	19%	29%	0%
Large extent									
rural	9%	0%	15%	0%	3%	9%	9%	12%	3%
Suburban	16%	0%	14%	3%	3%	3%	6%	15%	0%
Urban	5%	0%	10%	0%	5%	0%	10%	5%	5%

Total responses separated demographically			
	1-8 hours	9-32 hours	>32 hours
rural	13	12	10
suburban	20	11	4
urban	12	8	1

According to the data in table 2, suburban Illinois third grade teachers assigned computers to a greater extent than rural or urban teachers.

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The demographic groups were further subdivided by the number of hours of training each group received. Teachers in rural and suburban areas were equally represented (35 each). Urban areas were underrepresented (21).

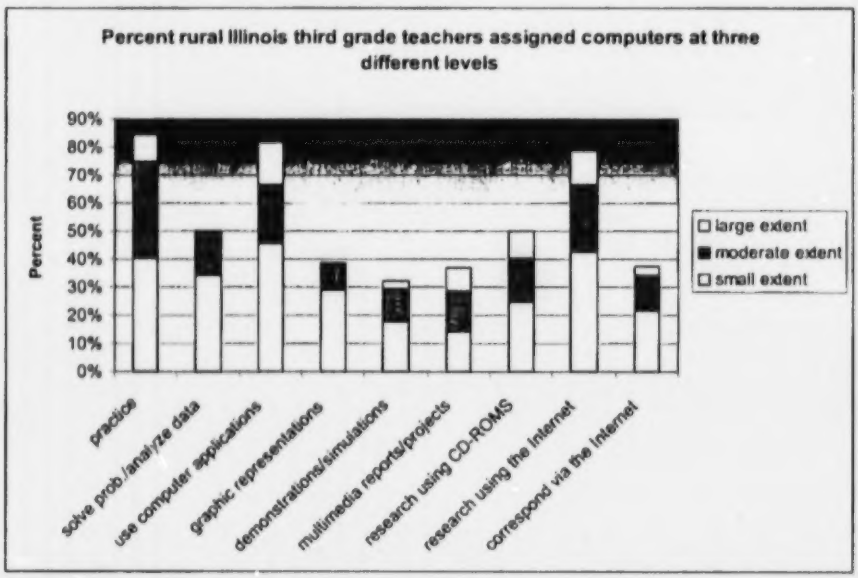

Figure 8

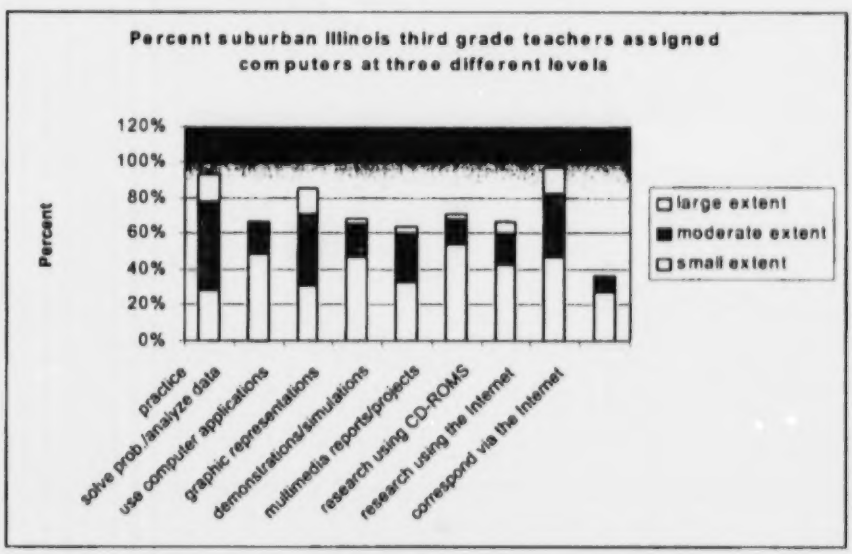

Figure 9

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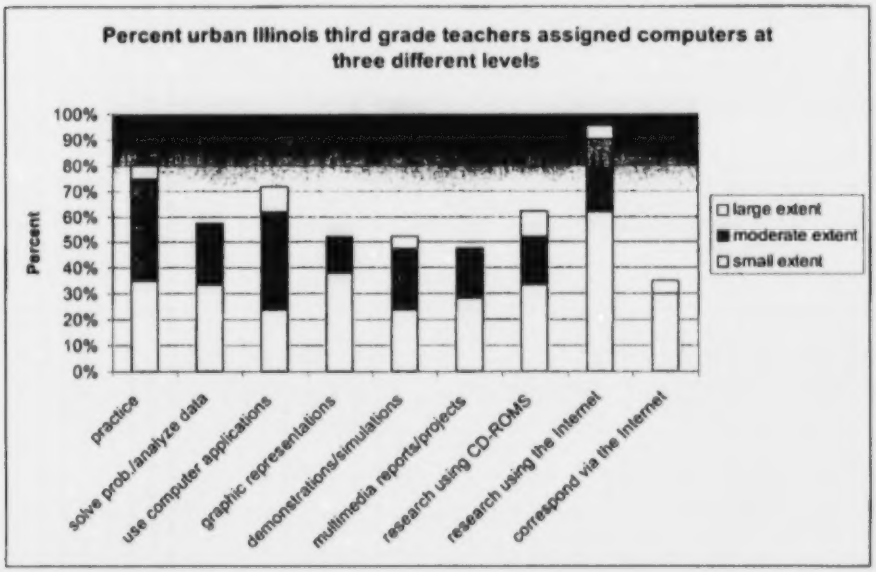

Figure 10

Feelings of preparedness

Illinois third grade teachers feelings of preparedness as a function of the number of hours of training

	not at all	somewhat	well	Very well
1-8 hours	9%	57%	27%	7%
9-32 hours	6%	48%	35%	10%
>32 hours	27%	20%	20%	33%

All public school teachers (1999 national survey) feelings of preparedness as a function of the number of hours of training.

	not at all	somewhat	well	Very well
1-8 hours	19%	55%	20%	6%
9-32 hours	4%	61%	25%	10%
>32 hours	1%	32%	37%	29%

Teacher training helped teachers feel increasingly more prepared as they received more training.

Illinois third grade teachers also reported how schools/districts offered training. Teachers required by their school or district to attend technology-training sessions received more hours of training. In schools where computer training was optional, attendance was at a minimum (1-8 hours).

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Training requirements

Figure 11. School Or District Training Requirements

1-8 hours	yes	no
require technology training	26%	74%
encourage technology with incentives	84%	16%
leave participation up to the teachers	76%	24%

9-32 hours	yes	no
require technology training	55%	45%
encourage technology with incentives	69%	31%
leave participation up to the teachers	55%	45%

>32 hours	yes	no
require technology training	80%	20%
encourage technology with incentives	87%	13%
leave participation up to the teachers	47%	53%

Computer-Related Assistance

Teachers were asked to choose out of a list of school positions the person who provided them with the most computer-related assistance. Technology coordinators and classroom teachers received the most votes. They helped the teachers the most in the following areas: use of computers, use of the Internet, technical support, integrating technology, and locating software. Media specialists had the next largest number of votes.

Conclusion

In a survey of Illinois third grade public school teachers, the data suggests that the number of hours of computer technology training make a difference in how computers are used. Teachers with more training are more likely to use computers in more ways and to a greater extent.

The data sorted by demographic area and the number of hours of training indicated some differences. Compared to third grade teachers in rural and urban areas, teachers in suburban areas

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used computer technology to a greater extent and in more ways. It is interesting because more teachers in rural areas had more hours of training.

The results of the responses of third grade teachers in Illinois compared top to the national sample of elementary teachers responses, showed some similarities and some differences. Illinois teachers assigned computers for research and for demonstrations and simulations more often than teachers in the national sample. Problem solving, however, was an area that was below the national survey average.

Also, the number of hours of training correlated to the teachers' feelings of preparedness. These results are similar to the results of the national survey.

Alternative explanations

Internal validity factors could have positively or negatively affected the outcome of the study. The results rely heavily on teacher honesty.

The results could be skewed since there were some groups with fewer respondents than other groups. In the group with >32 hours in urban areas, there was only one respondent. Also, there were fewer participants with >32 hours in relationship to the two other groups. There were 15 teachers who responded from the >32 hour group, 31 teachers from the 9-32 group, and 45 in the 1-8 hour group.

Overall, I thought that third grade teachers in Illinois with more than 32 hours of training would have assigned problem solving to a greater extent. They assigned it less than the participants in the national survey did. Perhaps, third grade teachers feel that due to time constraints they can not take the time to look for problem solving activities. Maybe, they would assign more problem solving and to a greater extent if web activities were prepared for them.

Another reason teachers in general would not assign computer technology to a great extent is the lack of computers in their classrooms. It is hard to use computers to a great extent when you have two computers in your room. Class size may also hinder computer use. One teacher on the survey commented that she has a big class. She was referring to the fact that she did not use computers with her class as much as she would like to.

I wonder what the responses would be if this survey were conducted in a state where computer knowledge needed to be demonstrated. In some states, the teachers in training are required to receive and demonstrate proficiency in order to become a teacher. Illinois does not require have this requirement.

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Appendix A

Survey Questionnaire

Survey on Teacher Training and Student Computer Use at the Third Grade Level

Definitions

E-mail (electronic mail)- Refers to text messages transmitted across networks and usually accessible only by the addressee.
Multimedia- Refers to the use of a computer to produce any combination of text, full color images and graphics, video, animation, and sound.
Self-contained classroom- Teaches all or most academic subjects to the same group of students all or most of the day.

***Please note**: Regular education teachers please complete this survey. Part-time, itinerant and substitute teachers, teacher's aides, volunteers, and principals are excluded

****This survey is to be completed on a voluntary basis.

Name of person completing this form: _____

*Title/position: _____

*School: _____

School Address: _____

*Area- urban, suburban, or rural: _____

E-mail: _____

*Required fields
Other fields needed if you would like a copy of the results

Please return completed form to : Annette Bedard J.C.Bush Elementary School 2117 W. Church Street Johnsburg, Illinois 60050 815-344-7104 (fax) email abedard@kidsroe.org	If you have any questions, contact: Annette Bedard 815-385-3731 e-mail abedard@kidsroe.org

1. To what extent do you assign students in **your typical class**, work that involves using computers or the Internet in the following ways? (If your school does not have these capabilities please check N/A. Check the appropriate box for each.

	Not at all	Small extent	Moderate extent	Large extent	N/A
a. Practice					
b. Solve problems/analyze data					
c. Use computer applications such as word processing, spreadsheets, etc.					
d. Graphical presentation of materials					
e. Demonstrations/ simulations					
f. Produce multimedia reports/projects					
g. Research using CD-ROM					
h. Research using the internet					
i. correspond with experts, authors, students from other schools, etc, via e-mail, internet					

2. On average, how frequently do **students in your typical class** use each of the following during class time? Check the appropriate box for each answer.

	Not at all	Rarely	Sometimes	Often
a. Computers in the classroom				
b. Computers in a computer lab or library/media				
c. Internet from the classroom				
d. Internet from the computer lab or library/media				
e. Distance learning via the Internet				
f. Distance learning via other modes of interactive				

3. In your opinion, how well prepared are **you** to use computers and the Internet for classroom instruction? Check one.

Not at all prepared	
Somewhat prepared	
Well prepared	
Very well prepared	

4. How many hours of formal professional development **in the use of computers and the Internet** did you participate in **during the last 3 years**? Check one answer.

0 hours	
1-8 hours	
9-32 hours	
More than 32 hours	

5. How many hours of formal professional development **in the use of computers and the Internet** did you participate in **4 to 5 years ago**? Check one answer.

0 hours	
1-8 hours	
9-32 hours	
More than 32 hours	

6. Does your school or district: Check all that apply.

	yes	no
a. Require technology training for teachers?		
b. Encourage technology training with incentives?		
c. Leave it up to teachers to initiate participation?		

7. Does your state, district, or school make the following types of training available to you, and if yes, have you ever participated in these programs?

	Available?			Participated?	
	Yes	No	Don't know	Yes	No
a. Use of computers/basic computer training					
b. Software applications					
c. Use of the Internet					
d. Use of other advanced telecommunications (e.g, interactive video, video, closed circuit TV)					
e. Integration of technology into the curriculum/classroom instruction					
f. Follow-up and/or advanced training					
g. Other (specify)					

8. Is there a "technology coordinator" (i.e., someone on the school or district staff who coordinates teachers' instructional use of computers and helps you and other teachers use computers) at your school?

Yes	
No	

9. Please indicate who at your school provides computer-related assistance to you for each of the following. Check all that apply.

	Use of computers	Use of the Internet	Technical support	Integrating technology	Locating Software
a. Technology coordinator					
b. Library media specialist					
c. Classroom teacher					
d. No assistance provided					
e. Other (specify)					

Appendix B

Survey Letter

Dear third grade teacher,

I called one hundred schools requesting principals to forward a survey to third grade teachers and I sent numerous emails and letters to different schools. I am encouraged by the number of schools requesting the survey either for the principal's approval or to forward to third grade teachers. It is my hope that I will have a sample of 100 completed surveys. **I need thirty more to meet my goal! Please consider helping.** The survey takes approximately nine minutes.

I am a third grade teacher at J.C. Bush Elementary School in Johnsburg, Illinois. Presently, I am in a master's program at Concordia University studying the correlation between teacher training in computer technology and student use. I need third grade teachers to volunteer to complete a nine-item survey on teacher computer technology training and student use. I am looking for teachers with different levels of training. I am hoping to have one or two volunteers from each school. I would like the surveys returned to me by May 31, 2002.

In return, I will send a copy of the results to your school. I have included the survey for your convenience. The surveys could be faxed, emailed, or mailed back to me.

Thank you for taking the time to read this letter. I hope you have a few minutes to respond.

Sincerely,

Annette Bedard

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Signature: Annette M. Bedard	Printed Name/Position/Title: Annette Bedard/third grade teacher	
Organization/Address: James C Bush 2117 Church Street Johnsburg,IL 60050	Telephone: 815 675 9336	FAX: 815-344-7104
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